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## Avoidant Personality Disorder and the Generalized Subtype of Social Phobia

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### Abstract

Social phobia and avoidant personality disorder (APD) may be given as comorbid diagnoses. However, it is not known if the labels provide independent, useful diagnostic information. We classified social phobics by social phobia subtype and presence of APD. Generalized social phobics with and without APD ( $n_s = 10$  and 10) and nongeneralized social phobics without APD ( $n = 10$ ) were distinguished on measures of phobic severity. The generalized groups also showed earlier age at onset and higher scores on measures of depression, fear of negative evaluation, and social anxiety and avoidance than did the nongeneralized group. APD criteria of general timidity and risk aversion were more frequently endorsed by social phobics with APD. The data suggest that both the generalized subtype of social phobia and the presence of APD do provide useful diagnostic information but the additional diagnosis of APD may simply identify a severe subgroup of social phobics.

When first defined in the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.; *DSM-III*; American Psychiatric Association, 1980), social phobia was conceptualized as anxiety in a single situation (akin to a simple phobia), and socially anxious persons with a more generalized presentation received an Axis II diagnosis of avoidant personality disorder (APD) rather than social phobia. The premise that most social phobic persons experience anxiety in only one social situation has since been challenged both empirically (S. M. Turner, Beidel, Dancu, & Keys, 1986) and conceptually (Heimberg, Dodge, & Becker, 1987;

Liebowitz, Gorman, Fyer, & Klein, 1985). Thus, when the diagnostic criteria for social phobia were modified in the revised *DSM-III* (*DSM-III-R*; American Psychiatric Association, 1987), a generalized subtype (experiencing fear in most social situations) was created, and the hierarchical rules were altered so that the diagnoses of social phobia and APD could be given concurrently. Although the essential feature of social phobia remained the same, the impact of these changes on the diagnostic category have not been fully evaluated. In particular, both changes may have addressed the same nosological issue and resulted in redundant diagnoses. That is, both categories, in theory, may identify subgroups of social phobic patients who are more impaired, with greater generalization of anxiety across situations or with a more chronic course, than patients diagnosed as social phobic by *DSM-III* criteria. Our study addresses whether the categories of generalized social phobia and APD are in fact redundant (i.e., they identify the same social phobic persons) or whether the two diagnostic categories independently contribute to the diagnostic nosology for social phobia.

### **Generalized Social Phobia**

The generalized subtype of social phobia denotes anxiety experienced in most situations, and generalized social phobics have been empirically distinguished from social phobics with more discrete fears of public speaking (Heimberg, Hope, Dodge, & Becker, 1990; Levin et al., 1991). The use of diagnostic subtypes assumes that the distinction can be made qualitatively, in that persons with social phobia can readily be assigned to a subtype category and that the boundary between generalized social phobia and nongeneralized social phobia is distinct. However, no standard operational definition exists for classifying social phobics according to subtype. Vague diagnostic boundaries have limited the subtypes' nosological utility, and clinicians have been left to decide what constitutes "most situations" (Heimberg, Holt, Schneier, Spitzer, & Liebowitz, 1991; Holt, Heimberg, Hope, & Liebowitz, 1992; Schneier, Spitzer, Gibbon, Fyer, & Liebowitz, 1991).

In practice, the diagnosis of discrete social phobia is given to a person with specific and limited social performance anxiety (e.g., speaking or eating in public or using public restrooms), whereas the generalized subtype is applied to a person with concomitant social interactional anxiety (e.g., dating, going to parties, or talking to co-workers; Schneier et al., 1991). That is, if the person experiences social interactional anxiety, anxiety is often presumed to be present in most social situations. Thus, the assignment of subtype might be made according to the type of situation feared.

The pervasiveness of social anxiety (and thus the assignment of generalized subtype) can also be defined as a function of the number of social situations feared. Heimberg et al. (1991) suggested that the assignment of a social phobia subtype can incorporate the assessment of anxiety across a broad range of social situations. Those patients with fear across literally most or all social situations may be assigned the generalized subtype. The remaining social phobics may be assigned a discrete subtype if their fears encompassed only one or two circumscribed situations, and others whose pervasiveness of feared social situations falls between the discrete and generalized subtypes may be assigned a nongeneralized

subtype. The operational definition for assigning the generalized subtype can then be refined empirically by investigating whether a moderately pervasive social phobia is more similar to the discrete or generalized subtype, by comparing nongeneralized social phobics to the other two groups.

### **Avoidant Personality Disorder**

APD describes persons who desire contact with others but who become anxious doing so and therefore actively avoid such contact (Millon, 1981). Diagnostic criteria for APD have also changed from the *DSM-III* to the *DSM-III-R*. In the *DSM-III*, all five criteria had to be met for a person to receive the diagnosis. In the *DSM-III-R*, APD became polythetic, and only four of seven criteria must now be met for diagnosis. APD is described as "a pervasive pattern of social discomfort, fear of negative evaluation, and timidity . . . present in a variety of contexts" (American Psychiatric Association, 1987, p. 315). The *DSM-III-R* recognizes that social phobia and APD diagnoses may coexist and therefore allows APD as a potential comorbid diagnosis of social phobia. Criteria for APD tend to describe more global patterns of behavior that may arise as consequences of social anxiety, and all but one of the seven criteria (see Table 1) have a social interactional component. This lone exception (Criterion 7) deals with the exaggeration of difficulties or risks associated with doing something other than a usual routine. With the requirement that only four of the seven criteria be present for a positive diagnosis of APD, it seems that many social phobic persons, particularly those with generalized subtype, may also meet APD criteria. Furthermore, subtype classification based on the presence of social interactional anxiety may also increase the overlap of APD and generalized social phobia.

### **Relation between Social Phobia and Avoidant Personality Disorder**

What is the evidence in regard to the potential overlap between social phobia and APD patient populations? Using *DSM-III* hierarchical criteria, S. M. Turner et al. (1986) compared 10 social phobic and 8 APD patients. The APD patients appeared to be more generally distressed, as evidenced by greater anxiety and depression as well as greater interpersonal sensitivity and social avoidance, than were social phobic patients. In addition, APD patients were rated as less behaviorally skilled. Alnaes and Torgeson (1988) examined the overlap of Axis I and Axis II disorders with and without the hierarchical exclusion criteria specified by the *DSM-III* and found that 9 of 10 social phobics met the criteria for APD.<sup>1</sup> All 10 social phobics also met study criteria for dependent personality disorder, which suggests that most social phobics are likely to have a mixed personality disorder with avoidant and dependent features. An extremely high percentage of patients in the study (80.3%) were given at least one personality disorder diagnosis, and this fact brings into question the nature of the study's sample and methodology. Even with the high prevalence of Axis II pathology in the sample, however, persons with social phobia were significantly more likely to have APD (and dependent personality disorder) than persons with other primary Axis I diagnoses.

**Table 1.** Frequency of Positive Personality Disorders Examination Ratings for *DSM-III-R* APD Diagnostic Criteria for Patients Grouped According to Presence of APD and GSP: Endorsement at Clinical and Subclinical Thresholds

APD criterion	Clinical threshold			Subclinical threshold		
	Non-GSP- non-APD	GSP- non-APD	GSP- APD	Non-GSP- non-APD	GSP- non-APD	GSP- APD
1. Is easily hurt by criticism or disapproval	1	1	2	1 <sub>a</sub>	3 <sub>a</sub>	9 <sub>b</sub>
2. Has no close friends or confidants (or only one) other than first-degree relatives	0	0	2	1 <sub>a,b</sub>	0 <sub>a</sub>	4 <sub>b</sub>
3. Is unwilling to get involved with people unless certain of being liked	0 <sub>a</sub>	0 <sub>a</sub>	8 <sub>b</sub>	2 <sub>a</sub>	2 <sub>a</sub>	8 <sub>b</sub>
4. Avoids social or occupational activities that involve significant interpersonal contact	1 <sub>a,b</sub>	0 <sub>a</sub>	5 <sub>b</sub>	1 <sub>a</sub>	3 <sub>a</sub>	9 <sub>b</sub>
5. Is reticent in social situations because of a fear of saying something inappropriate or foolish, or of being unable to answer a question	7	10	10	9	10	10
6. Fears being embarrassed by blushing, crying, or showing signs of anxiety in front of other people	1 <sub>a</sub>	4 <sub>a,b</sub>	8 <sub>b</sub>	4 <sub>a</sub>	4 <sub>a</sub>	10 <sub>b</sub>
7. Exaggerates the potential difficulties, physical dangers, or risks involved in doing something ordinary but outside his or her usual routine	0 <sub>a</sub>	0 <sub>a</sub>	4 <sub>b</sub>	1	2	4

**Note:** A clinical threshold designation required convincing examples or description of problems during a 5-year span; a subclinical threshold did not require such examples or description. Patients who met the clinical threshold are included in the subclinical threshold frequencies (Personality Disorders Examination score of 1 or 2). For each group,  $n = 10$ . APD = avoidant personality disorder; GSP = generalized social phobia. Frequencies with different subscripts are significantly different at  $p < .05$  (Fisher's exact test).

Few studies have reported on the co-occurrence of social phobia and APD under *DSM-III-R* criteria. Of 14 social phobic patients in a drug treatment study (Reich, Noyes, & Yates, 1989), 7 met criteria for APD according to the Structured Clinical Interview for *DSM-III-R*–Axis II (Spitzer & Williams, 1987), 3 according to the Personality Diagnostic Questionnaire (Hyler, Reider, & Spitzer, 1983) and 4 according to the Millon Clinical Multiaxial Inventory (Millon, 1982). In a preliminary study, evidence for baseline differences or for differences in response to drug treatment between small samples of social phobics with and without APD was inconclusive (Reich & Yates, 1988). This finding suggests that the presence of APD within social phobia does not predict a differential response to medication. Several authors

(e.g., Greenberg & Stravynski, 1983; Heimberg et al., 1987; R. M. Turner, 1987) have suggested from either theory or limited samples that social phobia is likely to be more responsive to both pharmacological and psychological treatment than APD.

Do the subtype of social phobia and the presence of APD provide independently useful diagnostic information? Recently conducted research (Herbert, Hope, & Bellack, 1992; Schneier et al., 1991; S. M. Turner, Beidel, & Townsley, 1992) has suggested that APD may identify a severe subgroup of generalized social phobics, but variability in methodology and results leaves the question unanswered. Furthermore, two of these studies (Herbert et al., 1992; Schneier et al., 1991) have found a small percentage of social phobics who met APD criteria but did not receive the generalized subtype, which is contrary to a continuum-of-severity model. Our study examines the characteristics of social phobics classified according to subtype and presence of APD on *DSM-III-R* criteria. We also seek to determine whether a quantitatively defined subtype, as suggested by the *DSM-III-R*, is empirically indicated. That is, can persons who experience social phobia in a limited number of social interactional situations be differentiated from generalized social phobics? Data were collected from clinician ratings, self-report, and an individualized behavioral test in order to examine convergent lines of evidence for the two research questions.

## Method

### *Subjects*

The sample consisted of 33 patients (age,  $M = 37.7$  years,  $SD = 9.5$ ; 53.3% men) who sought treatment for social phobia at the Center for Stress and Anxiety Disorders of the University at Albany, State University of New York, and who were accepted into one of two ongoing studies of treatment outcome. All met *DSM-III-R* criteria for social phobia as the primary diagnosis on the Anxiety Disorders Interview Schedule-Revised (ADIS-R; DiNardo & Barlow, 1988; see DiNardo, O'Brien, Barlow, Waddell, & Blanchard, 1983). The ADIS-R has been characterized by high rates of interrater agreement for the diagnosis of social phobia ( $\kappa = .87$ ; Barlow & DiNardo, 1991). All interviewers in this study were clinical psychologists or advanced doctoral students who had completed a rigorous training regimen and achieved satisfactory agreement with other interviewers. Persons were excluded for any one of the following diagnostic reasons: current primary diagnoses of another anxiety disorder or major depressive disorder, a history of psychosis or bipolar depression, or current drug or alcohol abuse. In addition, the subjects were required to be stabilized on psychiatric medication at the time of the initial interview.

### *Measures*

#### *Clinician assessment*

The initial ADIS-R provided *DSM-III-R* Axis I diagnoses of comorbid disorders. Patients referred to the program were interviewed again by a second clinician who used the social phobia sections of the ADIS-R and the Schedule for Affective Disorders and Schizophrenia-Lifetime for Anxiety Disorders (Fyer, Endicott, Mannuzza, & Klein, 1985) as a check on the social phobia diagnosis; no subjects were eliminated on this basis. The interviewer also

rated each person on the Clinician's Severity Rating (CSR), a 0–8 global rating included in the ADIS-R that incorporates both level of anxiety and degree of interference. Patients were included in our study if and only if they received a CSR of 4 or greater (which reflects moderate impairment in daily functioning and a need for treatment). In addition, the second interviewer administered the APD items of the Personality Disorders Examination (PDE; Loranger, 1988) and the anxiety and avoidance ratings of the Liebowitz Social Phobia Scale (LSPS; Liebowitz, 1987). The LSPS is a list of 24 common social phobic situations or behaviors rated for both degree of anxiety and frequency of avoidance. Interrater reliability of the clinician measures was not assessed in this study.

The PDE is scored as follows. Each *DSM-III-R* criterion receives a rating of 0–2. Criterion scores of 2 require patients to provide examples or a convincing description of that criterion, and only scores of 2 are considered for positive decisions to assign APD diagnoses. Criterion scores of 1 require a clinical judgment that the criterion may be present, in the absence of a patient's clear description to support the judgment. In addition, because personality disorders are presumed to be manifest by early adulthood, at least one criterion must be present before age 25 for an APD diagnosis to be given. Patients who meet at least four of the seven criteria with scores of 2 are diagnosed as APD definite, and patients who meet three criteria (one with onset before age 25) are diagnosed as APD probable. In this study, 5 subjects received a definite APD diagnosis, and 8 received a probable APD diagnosis. All subjects with probable APD met three APD criterion with a score of 2 and at least one more criterion with a score of 1. Probable and definite diagnoses according to PDE scoring were considered positive for APD. The sum of the PDE criterion ratings also provided a weighted dimensional score that ranged from 0 (*no criterion endorsement*) to 14 (*all criteria rated as 2*). It must be noted that APD items were not administered in the context of the full PDE interview and that differential diagnosis on Axis II was not possible.

The social phobia subtype was established by a third evaluator and by author Richard G. Heimberg (who did not have direct contact with the patients). Because there is no accepted standard for determining subtype, the diagnosis was made on a review of all baseline data and consensual agreement according to the following guidelines. The generalized subtype was assigned if the patient feared most or all social situations (per the *DSM-III-R* criterion). Patients who did not meet the generalized subtype criterion were classified as *nongeneralized* if they feared a number of social or observational situations but there were some areas of social functioning in which they were not anxious or as *discrete* if they feared only one or two highly circumscribed social situations. To assess the reliability of the subtype diagnosis, independent clinical judges examined only the specific situational anxiety ratings of the ADIS-R and the Schedule for Affective Disorders and Schizophrenia–Lifetime for Anxiety Disorders social phobia sections. Using this limited information, the clinical judges agreed with the assigned subtype diagnosis on 17 of 20 cases (85%,  $\kappa = .70$ ).

#### *Self-report assessment*

Subjects completed several self-report questionnaires for the assessment of social anxiety, depression, and related constructs. These included the Social Avoidance and Distress Scale (Watson & Friend, 1969), the Fear of Negative Evaluation Scale (Watson & Friend, 1969), the Main Fear and Social Phobia indexes of the Fear Questionnaire (FQ; Marks & Mathews,

1979), the Social Phobia Scale (Heimberg, Mueller, Holt, Hope, & Liebowitz, 1992; Mattick & Clarke, 1989), and the Social Interaction Anxiety Scale (SIAS; Heimberg et al., 1992; Mattick & Clarke, 1989). The Social Phobia Scale and SIAS are related scales in which the focus of the social phobia is on performance or observation situations and on social interactions, respectively.

The Cognitive-Somatic Anxiety Questionnaire (Schwartz, Davidson, & Goleman, 1978) assesses the degree to which a person experiences anxiety through either cognitive or somatic channels. The FQ Agoraphobia scale was included because agoraphobia has also been linked to APD (see Brooks, Baltazar, & Munjack, 1989). The Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) was administered as a measure of depressive affect.

#### *Behavioral test*

As a report of subjective anxiety in anticipation of and during a behavioral challenge, a Subjective Units of Discomfort Scale (SUDS; Wolpe & Lazarus, 1966) from 0 to 100 was developed for each subject. The subjects completed a 4-min individualized behavioral test of a situation expected to elicit a SUDS rating of at least 75 if actually encountered. Examples of tests included giving an impromptu speech, conversing with a person of the opposite sex, or participating in a group conversation at work or at a party. Graduate and undergraduate students and project staff served as role-play partners or audience members. SUDS were assessed at 1-min intervals for a 2-min anticipation phase (three ratings at Min 0, 1, and 2) and during the test (five ratings at Min 0, 1, 2, 3, and 4), which yielded a mean SUDS score and peak SUDS score separately for the anticipation and performance phases of the test.

#### *Patient Classification*

As mentioned previously, both definite and probable APD diagnoses were classified as positive for APD. One patient met five APD criteria, but the apparent age of onset was 40, and a diagnosis of APD, late onset (per Loranger, 1988) was given. Only 1 social phobic (with a fear of writing in public) was diagnosed as having a discrete subtype and was grouped with subjects who received the nongeneralized subtype diagnosis.

Three groups of 10 patients each were identified: (a) generalized social phobics with APD (5 with definite APD and 5 with probable APD), (b) generalized social phobics without APD, and (c) social phobics with neither generalized subtype nor APD. Only three patients had APD (all probable diagnoses) without generalized subtype. A full 2 (APD vs. no APD)  $\times$  2 (generalized vs. nongeneralized social phobia subtype) analysis of variance (ANOVA) was prohibited because of insufficient cell size.

## **Results**

#### *Avoidant Personality Disorder Criteria*

The frequency with which patients in each group met individual APD criteria is shown in Table 1. Results are reported both for items endorsed with a score of 2 (clinical threshold) and for items endorsed with scores of either 1 or 2 (subclinical threshold). Fisher's exact



test was used to examine group differences ( $p < .05$ ). For the clinical threshold, Criterion 5 (reticence because of possible humiliation) was the most frequently endorsed item, but there were not differences between groups. Only 3 patients, all in the nongeneralized-non-APD group, failed to endorse Criterion 5. Criteria 1 (hurt by criticism) and 2 (no close friends) also failed to discriminate between groups but were infrequently endorsed. Both Criteria 3 (guarantee of acceptance before involvement) and 7 (exaggeration of risks) had a significantly greater frequency in the generalized-APD group than in either of the other two groups. Criterion 6 (fear of showing anxiety) was more frequently endorsed by the generalized APD group than by the nongeneralized-non-APD group, and Criterion 4 (avoidance of interpersonal contact) was more frequently endorsed by the generalized-APD group than by the generalized-non-APD group.

Frequencies for the subclinical threshold reflect the presence of APD criteria without a clinician's judgment as to the severity or clarity of the examples. At this threshold the pattern of endorsement was similar to that at the clinical threshold (frequencies also included subjects who met the clinical threshold), but items that discriminated between groups changed somewhat. Criteria 1, 3, 4, and 6 were significantly more common among generalized social phobics with APD than among social phobics in the other two groups. Criterion 2 was significantly more frequent in the generalized-APD group than in the generalized-non-APD group, but the nongeneralized-non-APD group did not differ from the other two. Criteria 5 and 7 did not discriminate among groups, but Criterion 5 was the most frequently endorsed across groups: All but one patient endorsed it.

### *Group Differences*

One-way ANOVAs were conducted with group as the independent variable and each of the questionnaire measures, the CSR, the LSPS, the subject's age, and the age at onset of the disorder as dependent variables. To compensate for chance findings due to small sample size and the number of analyses, the significance criterion was set at  $p < .01$ . For those ANOVAs significant at this level, differences between pairs of means were examined with Duncan's multiple-range test ( $p < .01$ ). Table 2 presents only those measures that were significant in the initial ANOVA. The three patient groups were significantly different from each other on the basis of CSR, Social Avoidance and Distress Scale score, and LSPS anxiety ratings, and they could be consistently ordered by increasing severity: nongeneralized-non-APD, generalized-non-APD, and generalized APD. On the BDI, Fear of Negative Evaluation Scale, SIAS, and LSPS avoidance ratings, the two generalized groups had scores that indicated significantly greater severity than did the nongeneralized group, but the generalized groups did not differ from each other. In addition, the two generalized groups had equally early average ages for onset of social phobia, which was earlier than for the nongeneralized group. No group differences were found with the initial ANOVAs for age, the Social Phobia Scale, the Cognitive-Somatic Anxiety Questionnaire, or the FQ. In addition, there were no significant group differences for mean or peak SUDS scores for either the anticipatory or performance phases of the behavioral test. No sex differences were evident in these analyses.<sup>2</sup>

**Table 2.** Comparison of Social Phobic Patients by Presence of Avoidant Personality Disorder and Generalized Subtype of Social Phobia on Demographic and Clinical Measures

Variable	Total		Non-GSP-non-APD		GSP-non-APD		GSP-APD	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age (in years)	37.3	9.8	37.9	10.4	39.9	9.2	35.4	10.6
Age at onset of social phobia (in years)	16.5	8.7	22.6 <sub>a</sub>	8.7	10.9 <sub>b</sub>	4.4	16.0 <sub>b</sub>	10.3
Clinician's severity rating	5.9	1.2	5.1 <sub>a</sub>	0.9	5.9 <sub>b</sub>	1.4	6.8 <sub>c</sub>	0.4
Social Avoidance and Distress Scale	18.7	7.8	12.2 <sub>a</sub>	6.2	18.9 <sub>b</sub>	7.1	25.4 <sub>c</sub>	1.8
Fear of Negative Evaluation Scale	25.7	5.3	22.4 <sub>a</sub>	5.2	26.1 <sub>b</sub>	6.3	28.6 <sub>b</sub>	2.0
Social Interaction Anxiety Scale	45.2	15.3	31.4 <sub>a</sub>	12.2	48.2 <sub>b</sub>	12.1	56.2 <sub>b</sub>	9.8
Beck Depression Inventory	11.9	7.2	6.7 <sub>a</sub>	3.3	14.3 <sub>b</sub>	9.0	14.4 <sub>b</sub>	5.8
Liebowitz Social Phobia Scale								
Anxiety ratings	33.6	10.9	25.6 <sub>a</sub>	8.1	33.1 <sub>b</sub>	9.3	41.9 <sub>c</sub>	8.9
Avoidance ratings	29.2	12.1	19.5 <sub>a</sub>	8.2	31.7 <sub>b</sub>	12.5	36.8 <sub>b</sub>	8.6

**Note:** For each group,  $n = 10$ . The percentage of men was 53.3% in the total sample, 70% in the non-GSP-non-APD group, 40% in the GSP-non-APD group, and 50% in the GSP-APD group. GSP = generalized social phobia; APD = avoidant personality disorder. Only variables significant at  $p < .01$  in a  $1 \times 3$  analysis of variance were examined in pairwise comparisons. Group means with different subscripts are significantly different at  $p < .01$  (Duncan's multiple-range test).

### ***Comorbid Diagnoses***

The presence and type of comorbid Axis I diagnoses across groups was examined with Fisher's exact test in pairwise comparisons ( $p < .05$ ). The frequency of other *DSM-III-R* anxiety disorders across the three groups was not significant. Patients with both generalized subtype and APD, however, were significantly more likely than the other two groups to have a comorbid depressive mood disorder (no nongeneralized-non-APD subjects, 1 generalized-non-APD subject, and 7 generalized-APD subjects).

### ***Avoidant Personality Disorder Dimensional Score***

The validity of an APD dimensional score from the PDE ratings was examined in a correlational analysis with all 33 patients (including the 3 nongeneralized social phobics with probable APD). The APD dimensional score varied positively with the severity and pervasiveness of both social anxiety and avoidance measures. Significant Pearson product-moment correlations were found between the APD dimensional score and the CSR ( $r = .585$ ,  $p < .001$ ), Social Avoidance and Distress Scale ( $r = .539$ ,  $p < .001$ ), SIAS ( $r = .495$ ,  $p < .005$ ), and BDI ( $r = .398$ ,  $p < .05$ ). In addition, the LSPS anxiety ratings ( $r = .522$ ,  $p < .005$ ) and LSPS avoidance ratings ( $r = .559$ ,  $p < .001$ ) were significantly correlated with the APD dimensional score, as were the LSPS Performance and Social Interaction subscales for both anxiety and avoidance ratings ( $r$ s = .432–.521, all  $p$ s  $< .015$ ). The APD dimensional score was also correlated with the Social Phobia subscale of the FQ ( $r = .477$ ,  $p < .01$ ) but not the FQ

indices for Main Fear or Agoraphobia. Subject's age, age at onset of social phobia, and all other questionnaire and behavioral test measures were not significantly correlated with the APD dimensional score.

Many of the measures found to be correlated with APD were also significantly intercorrelated. Thus, stepwise multiple regression was used to assess the relative strength of association between the APD dimensional score and those measures found to have a significant univariate correlation with the dimensional score. Although all LSPS scale scores were significantly correlated with the dimensional score, only total scale LSPS anxiety and avoidance ratings were used in order to eliminate the autocorrelation of overlapping items of total and subscale scores and as an a priori reduction in the number of independent variables. CSR was entered into the regression equation first, followed by LSPS avoidance ratings, both of which are clinician-administered measures. No other predictors of APD dimensional score were entered into the equation at the significance-to-enter level set at  $p = .05$ . The final regression equation, adjusted  $R^2 = .426$ ,  $F(2, 27) = 11.74$ ,  $p < .001$ , suggested that higher CSR and higher LSPS avoidance ratings were the best combination of variables in this sample to predict higher APD dimensional scores. In fact, once CSR had been entered into the equation, only anxiety and avoidance ratings from the LSPS remained from the variables not yet entered as significant residualized predictors of APD dimensional score.<sup>3</sup> This reduction in the significance of all other potential predictors suggests that the other measures found to have significant correlations with the dimensional score may reflect an underlying dimension of general social phobic severity. This was measured best in the sample by the CSR and LSPS ratings but requires cross-validation.

## Discussion

The separate determination of social phobia subtype and presence of APD appears to have heuristic value among social phobia patients. Different groups of patients were identified on the basis of the covariation in the two diagnoses, and the groups could be distinguished on a series of clinically important indexes. The three groups—nongeneralized-non-APD, generalized-non-APD, and generalized-APD—could be ordered on the dimension of increasing severity with the CSR, Social Avoidance and Distress Scale score, and LSPS anxiety ratings. The addition of an Axis II diagnosis of APD appeared to identify more impaired persons beyond the Axis I diagnosis of social phobia, generalized subtype. Both generalized subtype groups could be further differentiated from the nongeneralized-non-APD group by higher scores on the BDI, Fear of Negative Evaluation Scale, SIAS, and LSPS avoidance ratings and with an earlier age of onset for their social phobia.

The seven APD criteria in the *DSM-III-R* appeared to have uneven diagnostic utility across social phobic groups. In general, the criteria that best discriminated between APD and non-APD groups suggest that social phobics with APD are likely to be more timid in approaching new or ambiguous situations, whether social (Criterion 3) or otherwise (Criterion 7), but do not appear to be more socially isolated (Criterion 2) than social phobics without APD. The visibility of anxiety symptomatology (Criterion 6) may also play a role, either by overconcern about embarrassment or by actual hyperarousal that leads to visible

symptomatology. Although Criterion 5 also pertains to social risk aversion, the high frequency across subgroups is likely because of its similarity to the essential feature of social phobia. Both Criteria 4 and 6 differentiated APD from non-APD groups at the subclinical threshold but did not clearly do so at the clinical level.

Generalized social phobics with APD were also more likely to have a comorbid depressive mood disorder (constrained to be of lesser severity than social phobia by the acceptance criteria for our study) than the non-APD groups. Using *DSM-III* criteria, S. M. Turner et al. (1986) also found patients with APD were more likely to be depressed than social phobics. The confluence of social phobia, APD, and a depressive disorder may be a clinically meaningful diagnostic constellation that warrants future investigation.

The APD dimensional score (a weighted sum of *DSM-III-R* criteria) was significantly related to the severity and pervasiveness of phobic anxiety and avoidance across social phobic situations. If this suggests a true dimension of APD severity, it may be characterized as risk aversion or timidity. However, the correlates of the APD dimensional score are also consistent with increasing severity and generalization of social phobia.

There was also ample evidence that a conservatively defined generalized subtype (regardless of APD diagnosis) could be differentiated from a more limited social interactional or performance anxiety. Twenty of 33 subjects (60.6%) were diagnosed with generalized subtype. Twelve of the 13 remaining patients had significant social interactional anxiety in some context in addition to the presence of performance anxiety. On measures found to be significantly different across the three groups, the nongeneralized subjects were consistently found to be different from the two generalized subtype groups. Because most nongeneralized social phobics had some social interactional anxiety, this finding suggests that there may be utility in distinguishing between subtypes on the basis of the pervasiveness of the anxiety across social situations (i.e., a quantitative definition) that cannot be explained simply in terms of social versus performance anxiety.

This study contained several methodological limitations. One limitation is inherent in the determination of generalized subtype and the reliable diagnosis of APD. No measure has been developed for diagnosing social phobia subtype, and our classification was based on consensual classifications according to clinicians' judgments. Many measures exist for Axis II assessment, with no clear standard. Reich (1987, 1989) has demonstrated that various standardized questionnaires and structured interviews produced different rates of positive diagnoses when they were used to assess the same persons. The PDE was selected to assess APD in our study because the 3-point rating of each APD criterion yielded a dimensional score, but only the APD items of the PDE were administered, and this may have affected the integrity of the PDE in unknown ways. We classified only 50% of social phobics with generalized subtype (39.4% of the overall sample) as definite or probable APD, as compared with the 89% rate reported by Schneier et al. (1991) among generalized social phobics assessed with the APD portion of the Structured Clinical Interview for *DSM-III-R*-Axis II (70% overall).

Second, a purely discrete subtype of social phobia was assigned only once. That is, only 1 patient, with anxiety about writing in front of others, clearly had no other performance or social interactional anxiety. Although other patients might have sought treatment for a discrete (most often performance-based) social phobia, a clinical assessment of the range

of potential difficulties most often revealed less salient situations that were either anxiety-producing or avoided at a clinically significant level. The cause of the infrequency of this subtype category is unknown, but the small number of cases may be due to sampling problems that result from our present referral system or from factors that are related to the diagnostic category (i.e., persons with a truly discrete social phobia are unlikely to seek psychological treatment). A previous study (Heimberg, Hope et al., 1990) found a sizable group of social phobics whose primary fear was of public speaking, but they were not classified with the three-subtype system. It is unknown how many of this group might have received the nongeneralized subtype diagnosis. In support of the validity of our subtypes, Schneier et al. (1991) also found only 2 pure discrete phobics among 50 social phobics. Taken at face value, the present distribution of subtypes suggests that a qualitative definition of subtype (i.e., performance vs. social interactional anxiety) may be more descriptive of the focus of treatment than of the actual pervasiveness of social phobia across types of situations.

Third, self-reports of anxiety experienced during the individualized behavior test did not discriminate between groups, and this finding is in line with that of Heimberg, Hope et al. (1990) who compared public-speaking phobics and generalized social phobics. Although the individualized behavior test has proven to be a good indicator of treatment response (Heimberg, Dodge et al., 1990), a set of standardized situations (e.g., an impromptu speech and a dyadic interaction) would have been a more appropriate one-time assessment for comparison across subjects (Herbert et al., 1992; Holt & Heimberg, 1990). Furthermore, physiological measures and observer ratings of visible anxiety and quality of performance or interaction may distinguish between subtypes of social phobia or presence of APD. A reactive pattern for heart rate during the behavior test has been found for public-speaking phobics but not for generalized social phobics who were typically involved in social interactions (Heimberg, Hope et al., 1990), which suggests that generalized social phobics (and perhaps those with APD) are arousal avoidant and may pursue activities that maintain minimum physiological arousal. This intriguing conjecture must be supported by more standardized assessment.

Fourth, a two-way ANOVA (Social Phobia Subtype  $\times$  APD) is a stronger test of the overlap of diagnoses among social phobics, but the nongeneralized-APD cell in this sample was prohibitively small. Among our nongeneralized social phobics, 3 of 13 (23.1 %) also had probable APD. Whether that fourth cell is a true diagnostic entity has yet to be established, but other studies with similar designs (Herbert et al., 1992; Schneier et al., 1991) have also reported a small proportion of nongeneralized social phobics with APD. This important group needs to be studied to determine if they represent a diagnostic group or simply reflect the unreliability with which the two diagnostic categories are assessed.

Finally, in this study we were concerned with APD among persons with a social phobia diagnosis and did not directly address the viability of APD as a diagnostic category. Our data suggest that APD and the generalized subtype diagnosis are not redundant among social phobics, although APD may simply identify the most severe social phobics along a continuum. Furthermore, other research has shown that APD occurs without social phobia (e.g., with agoraphobia or with no comorbid Axis I diagnosis; Alnaes & Torgeson, 1988; Reich, 1987), and an equally important question is how common social phobia is among

those persons diagnosed with APD. The revision of APD criteria from the *DSM-III* to the *DSM-III-R* may have also contributed unduly to diagnostic overlap with the addition of a polythetic structure and further elaboration of socially relevant criteria.

APD and generalized social phobia do not denote distinct categories of social phobic patients. Instead, our results suggest a continuum of increasingly severe and pervasive symptomatology among social phobics. Those patients who receive diagnoses of both generalized social phobia and APD appear to be most impaired. However, does this suggest that both diagnoses ought to be given to these patients? The answer to this question is not clear. It may depend on information in regard to etiology, course, and treatment response that is not yet available. Future revisions of the *DSM* may influence the answer by refining criteria and minimizing diagnostic overlap. Finally, researchers and clinicians need to examine the implications of describing social anxiety in terms of Axis I versus Axis II.

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## Notes

1. Social phobia with avoidant personality disorder is not a possible diagnosis under *DSM-III* criteria. The numbers presented in this article are from Alnaes and Torgeson's (1988) analysis with exclusionary rules. Thus, it appears that Axis I and Axis II disorders were allowed to overlap; exclusionary rules were followed only for other diagnoses on a given axis.
2. Data for nonsignificant results are available from Richard G. Heimberg.
3. A full intercorrelation matrix is available on request from Richard G. Heimberg. Alternate regression solutions were tested in which each of the variables that did not enter the stepwise analysis were entered in the equation first. Subsequent stepwise entry of the remaining predictors, with allowance for variable removal, resulted in the similar regression solutions of Clinician's Severity Rating and either the Liebowitz Social Phobia Scale avoidance or anxiety ratings as the best joint predictors of the avoidant personality disorder dimensional score. This suggests that Clinician's Severity Rating and Liebowitz Social Phobia Scale ratings were also adequate residualized predictors of the avoidant personality disorder dimensional score in this sample.

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